

We claim:

1. A plasma display panel comprising:
barrier ribs configured to form a plurality of closed cells;
display electrodes formed on a front substrate; and
an address electrode formed on a rear substrate, with said barrier ribs disposed between said front and rear substrates to define a delta color pixel structure having a plurality of sub-pixels, wherein
each of the sub-pixels has a discharge region which is filled with a first discharge gas of at least 15 % by volume, and a second discharge gas of 85% or less by volume.
2. The plasma display panel of claim 1, wherein said first gas is a xenon gas and said second gas is a neon-based or helium-based gas mixture.
3. The plasma display panel of claim 2, wherein said neon-based gas mixture is neon-argon or neon-krypton.
4. The plasma display panel of claim 3, wherein said helium-based gas mixture is helium-argon and helium-krypton.
5. The plasma display panel of claim 2, wherein an operation margin for the plasma display panel is not less than 10 voltages when said discharge region is filled with the xenon gas of 30% by volume.

6. The plasma display panel of claim 1, wherein said discharge region is coated with a phosphor layer.

7. A plasma display panel comprising:
barrier ribs configured to form a closed shape;
display electrodes formed on a front substrate; and
an address electrode formed on a rear substrate, with said barrier ribs disposed between said front and rear substrates to define a delta color pixel structure having a plurality of sub-pixels, wherein
each of the sub-pixels has a discharge region which is filled with a first discharge gas of 50 % or less by volume, and a second discharge gas of 50% or more by volume.

8. The plasma display panel of claim 7, wherein said first gas is a xenon gas and said second gas is a neon-based or helium-based gas mixture.

9. The plasma display panel of claim 7, wherein said neon-based gas mixture is neon-argon, and neon-krypton.

10. The plasma display panel of claim 7, wherein said helium-based gas mixture is helium-argon and helium-krypton.

11. The plasma display panel of claim 7, wherein an operation margin for the plasma display panel is not less than 10 voltages when said discharge region is filled with the xenon gas of 30% by volume.

12. The plasma display panel of claim 7, wherein said discharge region is coated with a phosphor layer.

13. A method of constructing a plasma display panel comprising:
configuring barrier ribs to form a closed shape;
forming display electrodes on a front substrate; and
forming an address electrode on a rear substrate, with said barrier ribs disposed between said front and rear substrates to define a delta color pixel structure having a plurality of sub-pixels, wherein
each of the sub-pixels has a discharge region which is filled with a first discharge gas of 50 % or less by volume, and a second discharge gas of 50% or more by volume.

14. The method of claim 13, wherein said first gas is a xenon gas and said second gas is a neon-based or helium-based gas mixture.

15. The method of claim 13, wherein said neon-based gas mixture is neon-argon and neon-krypton.

16. The method of claim 13, wherein said helium-based gas mixture is helium-argon and helium-krypton.

17. The method of claim 13, wherein an operation margin for the plasma display panel is not less than 10 voltages when said discharge region is filled with the xenon gas of 30% by volume.

18. The method of claim 13, wherein said discharge region is coated with a phosphor layer.